



## Work Group Meeting Notes

Work Group Name: Advanced Manufacturing  
Work Group Chair: Charley Edmondson  
Meeting Date: Monday, September 12, 2011, 10:00 – 12:00 p.m.

### Work Group Members Present:

Dr. Charles Edmondson, Alfred University  
Nadine Powell, Buffalo Niagara Partnership  
James Strickland, NYS DEC  
Corey Wiktor, Cattaraugus County IDA  
Mike Casale, NCDDED  
John Cappellino, ECIDA  
Ben Rand, Insyte Consulting  
Paul Dedrick, Buffalo Games  
Bernie Switzer, Precision Manufacturing Group  
George McNamara, Pfannenbergl  
Ravi Bansal, AirSep  
Dr. Gregory DeCinque, JCC  
Todd Tranum, Chautauqua County Chamber

### Summary of Meeting:

Charley and Nadine began Work Group Session #2 by revisiting the work group process timeline and the task for Work Group #2 namely, to develop detailed *strategies* to capitalize on the identified principal regional economic drivers and to address critical issues that have impeded economic growth. A final working definition of advanced manufacturing was agreed upon as “the production of technologically advanced products and/or the use of technologically sophisticated manufacturing processes. It is also distinguished by reliance on highly trained workers, constant innovation in both design and production, and the attendant need for close proximity between research, design and labor.”

Charley then presented the **five** critical issue categories that the work group will focus on for the remainder of the work group process: **labor, research capacity, access to capital, tax & regulatory burden, and perception** (of WNY manufacturing importance and image, future outlook for manufacturing and impact on the talent pool and the sector’s competitiveness).

Work groups members were asked to think about the following questions pertaining to each critical issue category as they discussed the critical issues in small groups for approximately 60 minutes.

- **Labor**
  - What are the characteristics of labor required for advanced manufacturing?
  - How can WNY develop those characteristics?
  - How do we make labor a competitive advantage for WNY?
  
- **Research Capacity**
  - What research attributes are needed for advanced manufacturing?
  - What are WNY's research strengths?
  - How do we make research a competitive advantage for WNY?
  
- **Access to Capital**
  - Does advanced manufacturing have a distinctive need for investment?
  - Does WNY presently have sufficient capital?
  - How do we attract adequate capital & make this one of WNY's competitive advantages?
  
- **Tax & Regulatory Burden**
  - How does the current environment impact prospects for advanced manufacturing?
  - How can we create a tax climate and a regulatory environment that is a competitive advantage for WNY?
  
- **Perception**
  - What is the current perception/image of WNY advanced manufacturing in the eyes of investors, labor, and research talent?
  - How can this perception be turned into an advantage?
  - Who is the target audience for an image change?

The work group then reconvened & reported the "outcomes" from their discussions....

### **Labor**

Advanced manufacturing involves a wide range of jobs, ranging from entry-level positions to high-end jobs in engineering and design – often a misperception that these high-skill jobs even exist (tie-in to perception category). Jobs at the beginning of the spectrum often require basic knowledge of math and computing and workforce skills like reliability, punctuality, attention to detail and the ability to pass a drug screening. High-end jobs often require advanced degrees in math, computing and science-based fields and are buttressed by quality work experience. The concept of human capital needs prominence.

**How do we make labor a competitive advantage for WNY?** Reflecting the diversity of job types involved in the advanced manufacturing processes, developing these skills will take on disparate forms. For entry-level jobs, investing in the entire education pipeline starting in Pre-K can better equip the labor force with needed skills – *early intervention is key*. Programs like *Dream It. Do It*, currently in the three southern counties of the region have potential to be expanded to the 5-county region and spread the message that manufacturing can be a good career and offers opportunities for upward mobility. *Dream it. Do it.* should be leveraged to instill work ethic.

For higher-skill jobs, the current universities are a tremendous resource, but there is a belief that more needs to be done to capitalize on this asset. Keeping students here, getting them excited about opportunities in manufacturing and making stronger connections with jobs –to-degrees can be strategies to advance this goal. Another inroad is to find ways to lax immigration policies so that foreign-students trained here can fill opportunities that are being overlooked by domestic students. Visa reform is necessary in order to keep high-skilled graduates here in the U.S. to help spur innovation and growth.

## **Research Capacity**

Research capacity is an on-going, constant feature of maintaining a competitive advantage in advanced manufacturing, allowing products to be made faster, cheaper and more durable. This research must be product and company-focused, embracing the value of cost-effectiveness and not just the pursuit of science. For small to mid-sized companies, this resource can be particularly difficult to access.

Western New York has particularly strong capacities in research related to bio-medical devices, advanced materials and coatings, energy – both the production and storage, precision-fitting components and advanced electronics components.

**How do we make research a competitive advantage for WNY?** Leveraging these strengths may require an inventory of the various capacities in the region so that they can be positioned in way to assist existing and start-up small advanced manufacturing ventures. Need a regional vision of research supporting the sector, we must link research to economic development community, there is a critical need for marketing/awareness campaign that is centered on the region's research strengths.

## **Access to Capital**

Access to capital is often a key ingredient to making advanced manufacturing units viable as it allow processes to stay on the cutting edge and maintain operations. Because these investments increase efficiencies, they often do not result in immediate new job creation, but can be pivotal to retaining existing jobs. Access to capital can be particularly challenging to small manufacturing units.

**How do we attract adequate capital & make this one of WNY's competitive advantages?** Improving access to capital can take a variety of forms including tying incentives to performance-based criteria instead of merely new jobs created, expediting the dispersal of NYS assistance so that it is not only available after the fact and leveraging technical assistance providers like Insyte Consulting and the region's universities to help identify investment opportunities. Need to speed process but at the same time, there needs to be public education around the realities/timeframe of the funding process.

## **Tax & Regulatory Burden**

The tax and regulatory climate of New York State has been cited as the most pressing challenge to advanced manufacturers. There is an understanding that tax & regulatory reform is a long-term objective but it was agreed that economic development strategy pertaining to boosting the growth of the advanced manufacturing sector cannot be discussed without touching on the competitive disadvantage that the current climate places NYS manufacturers at.

**How can we create a tax climate and a regulatory environment that is a competitive advantage for WNY?** SEQR reform is critical. Worker's Compensation and Unemployment insurance are two of the "big ticket" items that hurt manufacturers and significantly drive up costs in the region. Other more subtle issues have to do with a lengthy permit process, nonsensical mandates related to labeling of capital infrastructure and laborious auditing have detrimental impacts. Stakeholders believe one approach to shedding these problems is to perform a peer-state analysis to determine unique models of reform (ex. the i.e. NYS DEC modeling the Louisville's enforcement of the Clean Air Act through Air Pollution Control Districts) that can be implemented in New York State. While change will likely require statutory change, the stakes are too high to ignore this burdensome problem. Utility taxes, EZ audits are costly, increase pre-regulatory approvals to proceed. Examine, reduce/consolidation duplicative, costly processes, services, departments.

## **Perception**

Perceptions of advanced manufacturing, both internally and externally, pose challenges to regions across the country. Poor overall of U.S. (and WNY) manufacturing as a whole, lack of positive marketing around the industry (job opportunities, innovation). The family tree pipeline of producing legacies of workers no longer exists as young workers have more diverse interests and a false perception exists that advanced manufacturing does not involve innovation and opportunities for mobility.

**How can this perception be turned into an advantage?** Leveraging programs like *Dream It. Do It* and the region's educational institutions through a centralized approach can help chip away at this challenge. Integrating student loan forgiveness programs (much like the Teach for America model) and more support of H1B Visa sponsorships for retaining international talent can be part of the solution. Other focal areas include focusing on bringing back ex-patriots to the region, investing in the education pipeline from K – postsecondary schools and targeting outreach efforts at families, communities and our schools. A focused message is necessary. Target audience must be grade school, middle, high-school counselors without forgetting Pre-K is a critical component to work readiness and there are also opportunities with graduate students and the adult population. In short, the region must craft a positive message and share it with the community.

The meeting concluded with a call to work group members to keep thinking of strategies in which we can address these five critical issues. The work group will reconvene on Wednesday, September 21<sup>st</sup>.